



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/576,668

04/21/2006

Roger Anton Marie Timmermans

NL 031291

8166

24737

7590

03/30/2009

PHILIPS INTELLECTUAL PROPERTY & STANDARDS

P.O. BOX 3001

BRIARCLIFF MANOR, NY 10510

EXAMINER

KIM, PETER B

ART UNIT

PAPER NUMBER

2851

MAIL DATE

DELIVERY MODE

03/30/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/576,668	Applicant(s) TIMMERMANS ET AL.	
	Examiner Peter B. Kim	Art Unit 2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,9-15,19-23,25 and 26 is/are rejected.
- 7) ☒ Claim(s) 2-8,16-18 and 24 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 9-15, 19-23, 25 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Johnson (6,133,986).

Johnson discloses an apparatus and the corresponding method for forming an optical image in a radiation sensitive layer (12) which apparatus comprises a radiation source (9), a positioning mean (col. 19, lines 20-24); an array of individually controllable light valves (11) arranged between the radiation source and the location for the radiation-sensitive layer (col. 4, lines 39-41), and a two-dimensional array of converging elements (2, col. 4, lines 33-39) arranged on a converging plate between the array of light valves and the substrate holder such that each converging element correspond to different one of the light valves and converges exposure beam from the corresponding light valve in a spot area (Fig. 4, ref. 15) in the radiation sensitive layer (col. 4, lines 42-48), characterized by monitoring means (col. 22, lines 40-47), for individually monitoring the spots formed by the convergent elements and/or for determining the positions of these spots with respect to the radiation sensitive layer (monitoring focus position of the spots), which means (grating, Fig. 28) are arranged downstream the array of convergent

Art Unit: 2851

elements and use the exposure beam radiation. Johnson discloses the converging elements being refractive lenses (Fig. 2) and an optical projection system (1) being arranged between the array of light valves and the array of converging elements. Johnson discloses the lithography tool in Fig. 2 and col. 4, lines 28-48) and the radiation sensitive layer being a resist layer and the patterned feature corresponding to a device pattern (inherent to Fig. 2).

Allowable Subject Matter

Claims 2-8, 16-18 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 2, none of the prior art of record teaches or discloses an apparatus for forming an optical image of claim 1, characterized in that the monitoring means comprises a movable module, which is provided with a slit plate comprising an array of slits and with a corresponding array of radiation detectors in register with the slits.

Regarding claim 16, none of the prior art of record teaches or discloses a method of forming an optical image of claim 15, characterized in that the control process comprises the step of scanning the array of spots and a measuring module comprising an array of slits and a corresponding array of radiation detectors with respect to each other.

Regarding claim 24, none of the prior art of record teaches or discloses a method of claim 23 characterized in that the image is divided in sub-images each belonging to a different level of the device to be produced and in that during formation of the different sub-images the resist layer surface is set at different distance from the array of refractive lenses.

Art Unit: 2851

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter B. Kim whose telephone number is (571) 272-2120. The examiner can normally be reached on 9:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diane Lee can be reached on (571) 272-2399. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Peter B. Kim/
Primary Examiner, Art Unit 2851

March 25, 2009